

**EXHIBIT A**

**Curriculum Vitae**

## CV Martin Devenney

Martin Daniel Devenney, Ph.D.

Symyx Technologies  
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**Experience:**

- 3/01-Present **Symyx Technologies, Santa Clara, *Director, Electronic and Related Materials***
- 3/99- 2/01 **Symyx Technologies, Santa Clara, *Group Leader, Electronic and Related Materials***  
Technical management, personnel and budgetary responsibility for collaborative and internal research programs, in the Electronic and Related Materials business unit. (15 personnel). Report directly to CTO and work with business development to identify and develop new applications for combinatorial discovery.
- 9/97-2/99 **Symyx Technologies, Santa Clara, *Staff Scientist***  
Project leader of luminescent materials program in collaboration with industrial partners. Discovered X-ray storage phosphor that will be commercialized by Agfa. Developed combinatorial synthesis and screening techniques and automation for inorganic materials research including combinatorial techniques for discovery of fuel cell electrocatalysts.
- 11/96-8/97 **Symyx Technologies, Santa Clara, *Postdoctoral Research Associate***  
Developed combinatorial methodologies for novel materials discovery including combinatorial electrochemistry techniques and solution based approaches to combinatorial arrays of inorganic materials.
- 07/94-10/96 **University of North Carolina, Chapel Hill, *Postdoctoral Research Associate* with Prof. T.J. Meyer**  
Photophysical (steady state and time resolved) and electrochemical studies of transition metal polypyridyl complexes.

**Education:**

- 7/94 **Ph.D. Inorganic Chemistry, Queen's University of Belfast, Northern Ireland with Professor J. Grimshaw**  
Thesis: Spectroelectrochemical properties of poly (amino acid) and metalloporphyrin modified electrodes.
- 7/90 **B.Sc. (1st class Hons.) Chemistry, Queen's University of Belfast, Northern Ireland**

**Publications:**

Over 20 scientific publications and patents. Presentations at national and international conferences including plenary lecture at American Ceramics Society Meeting.

**Affiliations:**

Member of American Chemical Society, Electrochemical Society and Materials Research Society

## Publications, Martin Devenney

## Martin Devenney

## Publications (February 5, 2003):

- (1) \* "UV-VIS and Resonance Raman Spectroelectrochemical Properties of Transition Metal Centres Immobilised within a Poly (amino acid) Matrix: Illustrated with an Iron Porphyrin" S.E.J. Bell, M. Devenney, J. Grimshaw, J.T. Grimshaw and J.J. Mc Garvey *J. Chem. Soc., Chem. Commun.* 1992, 221-222
- (2) \* "Electrode Materials Derived From Poly (amino acids). Synthesis and Application of Porphyrin Doped Materials" S.E.J. Bell, M. Devenney, J. Grimshaw, J.T. Grimshaw *Journal de Physique, IV* 1994, 4, 157-161
- (3) "Synthesis and Reactivity of Osmium Hydrazido and Dinltrogen Complexes" G.M. C6ia, M. Devenney, T.J. Meyer, D.A. Wink, L.K. Keefer *Inorg. Chem.* 1997, 36, 2341-2351
- (4) \* "Excited State Interactions in Thin Electropolymerized Films of Ru<sup>II</sup>, Os<sup>II</sup> and Zn<sup>II</sup> Polypyridyl Complexes" M. Devenney, L. A. Worl, S. Gould, A. Guadalopec, B. P. Sullivan, J. V. Caspar, R. L. Leasure, J. R. Gardner and T. J. Meyer *J. Phys. Chem. A* 1997, 101, 4535-4540
- (5) "Intraligand Electron Delocalization, Steric Tuning, and Excited -State Vibronic Coupling in the Photophysics of Phenyl-Substituted Bipyridyl Complexes of Ru(II)" N. H. Damrauer, T. R. B6ussie, M. Devenney and J. K. McCusker, *J. Am. Chem. Soc.*, 1997, 119, 8253 -8268,
- (6) "An Antenna Polymer for Visible Energy Transfer" L. M. Dupray, M. Devenney, D.R. Striplin and T.J. Meyer, *J. Am. Chem. Soc.* 1997, 119, 10243 - 10244
- (7) "A Rare-Earth Phosphor Containing One-Dimensional Chains Identified Through Combinatorial Methods" E. Danielson, M. Devenney, D. M. Giaquinta, J. H. Golden, R. C. Haushalter, E. W. McFarland, D. M. Poojary, C. M. Reaves, W. H. Weinberg, X. D. Wu *Science* 279, 1998, 837-839
- (8) \* Preparation and Characterization of Electrodes Modified with Iron Porphyrins Immobilized in a Poly(amino acid) Matrix, Devenney, Martin; Grimshaw, James; Trocha-Grimshaw, Jadwiga. *J. Chem. Soc., Perkin Trans. 2* (1998), Issue 4, 917-924.
- (9) "Ruthenium(II) MLCT Excited States. Stabilization toward Ligand Loss in Rigid Media" Mark Adelt, Martin Devenney, Thomas J. Meyer, David W. Thompson, and Joseph A. Treadway, *Inorg. Chem.* (1998), 37(11), 2616-2617.
- (10) "Electropolymerized Films of Macromeric Assemblies" Toru Kajita, Robert M. Leasure, Martin Devenney, Duane Friesen, and Thomas J. Meyer, *Inorg. Chem.* 1998, 37(19), 4782-4794
- (11) "Resonance Raman and Surface-enhanced Resonance Raman Studies of Polymer-modified Electrodes which mimic Heme Enzymes" Bell, Steven E. J.; Devenney, Martin D.; Grimshaw, James; Hara, Susumu; Rice, James H.; Trocha-Grimshaw, Jadwiga, *J. Chem. Soc., Faraday Trans.* (1998), 94(19), 2953-2960.
- (12) "X-ray Powder Structure of Sr<sub>2</sub>CeO<sub>4</sub>: a New Luminescent Material Discovered by Combinatorial Chemistry" E. Danielson, M. Devenney, D. M. Giaquinta, J. H. Golden, R. C. Haushalter, E. W. McFarland, D. M. Poojary, C. M. Reaves, W. H. Weinberg, X. D. Wu, *J. Mol. Struct.* 1998, 469, 229-235

**Publications, Martin Devenney**

- (13) "Excited-State Electron Transfer in a Chromophore-Quencher Complex. Spectroscopic Identification of a Redox-Separated State." Lopez, Rosa; Leiva, Ana M.; Zuloaga, Fernando; Loeb, Barbara; Norambuena, Ester; Omberg, Kristin M.; Schoonover, Jon R.; Striplin, Durwin; Devenney, Martin; Meyer, Thomas J, Inorg. Chem. (1999), 38(12), 2924-2930.
- (14) "Optimization of cerium doped garnets using combinatorial chemistry for application as luminescent conversion phosphors in white LEDs." Wu, Jennifer L.; Devenney, Martin; Danielson, Earl; Poojary, Damodara; Weinberg, Henry. Mater. Res. Soc. Symp. Proc. (1999), 560(Luminescent Materials), 65-70.
- (15) "Combinatorial Electrochemical strategies for the discovery of new fuel cell electrode materials." Strasser, Peter; Gorer, Sasha; Devenney, Martin; International Symposium on Fuel Cell Electrode Materials, edited by O. Yamamoto, p153, Nagoya, November 2000, Electrochemical Society of Japan.
- (16) Combinatorial synthesis and screening of Cerium-doped garnet phosphors for application in white GaN-based LEDs. Wu, Jennifer L.; Danielson, Earl; DenBaars, Steven P.; Devenney, Marty; McFarland, Eric W.; Srdanov, Vojislav I.; Weinberg, Henry. Dept. of Chemical Engineering, University of California, Santa Barbara, USA. Proceedings of SPIE-The International Society for Optical Engineering (2001), 4445(Solid State Lighting and Displays), 70-81.

\* Principal Author

**Granted Patents**

US 6,013,199 "Phosphor materials" Jan 11, 2000

US 6,187,164 "Method for creating and testing a combinatorial array employing individually addressable electrodes" Feb 13, 2001

US 6,203,726 "Phosphor Materials" Mar 20, 2001

US 6,315,923 "Storage phosphors based on activated garnet and methods for storing and releasing an image produced by X-ray exposure." 2001

**Published Patent Applications**

McFarland, Eric; Danielson, Earl; Devenney, Martin; Warren, Christopher J. Potential masking systems and methods for combinatorial library synthesis. PCT Int. Appl., 41 pp. CODEN: PIXXD2 WO 9814641 A1 980409. CAN 128:314258 CAPLUS

Boussie, Thomas; Murphy, Vince; Van Beek, Johannes A. M.; Devenney, Martin; Turner, Howard W.; Powers, Timothy. Encoding of organometallic libraries. PCT Int. Appl., 48 pp. CODEN: PIXXD2 WO 9905318 A1 990204. AN 1999:96397 CAPLUS

Giaquinta, Daniel; Devenney, Martin; Hall, Keith Anthony; Goldwasser, Isy. Preparation of combinatorial arrays of materials using solution-based methodologies. PCT Int. Appl. (2000), 68 pp. CODEN: PIXXD2 WO 0017413 A2 20000330 AN 2000:210453 CAPLUS

WO103156A1:Method for preparing a CsX photostimulable phosphor and phosphors therefrom

Doped manganese dioxides for use in battery electrodes. Feddrix, Frank H.; Donne, Scott W.; Devenney, Martin; Gorer, Alexander. (Eveready Battery Company, Inc., USA) PCT Int. Appl. (2001), 59 pp. CODEN: PIXXD2 WO 0193348 A2 20011206

**Publications, Martin Devenney**

**Polymer libraries on a substrate, method of forming polymer libraries on a substrate and characterization methods with same.** Boussie, Thomas R.; Devenney, Martin. (Symyx Technologies, Inc., USA). Eur. Pat. Appl. (2001), 18 pp. CODEN: EPXXDW EP 1160262 A1 20011205

**Luminescence conversion based light emitting diode and phosphors for wavelength conversion.** Danielson, Earl; Ellens, Andries; Jermann, Frank; Rossner, Wolfgang; Devenney, Martin; Giaquinta, Daniel; Kobusch, Manfred. (Osram Opto Semiconductors G.m.b.H. + Co.O.-H.g., Germany; Symyx Technologies Inc.). PCT.Int. Appl. (2002), 35 pp. CODEN: PIXXD2-WO 0211173 A1 20020207